



APICAL INDUSTRIES, INC.  
dba DART AEROSPACE

TRANSACTION CODES (TC):  
A-ADD C-CREATE  
R-REVISE D-DELETE

ENGINEERING CHANGE NOTICE NO.

05360

SHEET 1 OF 1

DWG NO. 646.9700

REV: D

PREPARED BY J. BECKER

DATE: 03/24/16

EFFECT ON DWG  
☐ INC. ☒ UNINC.

DWG TITLE: CUTTER SUB ASSY

APPROVED BY:

ENGR

MFG

QC

EFF. CURRENT ORDER

REASON: REVISED DIMENSIONS

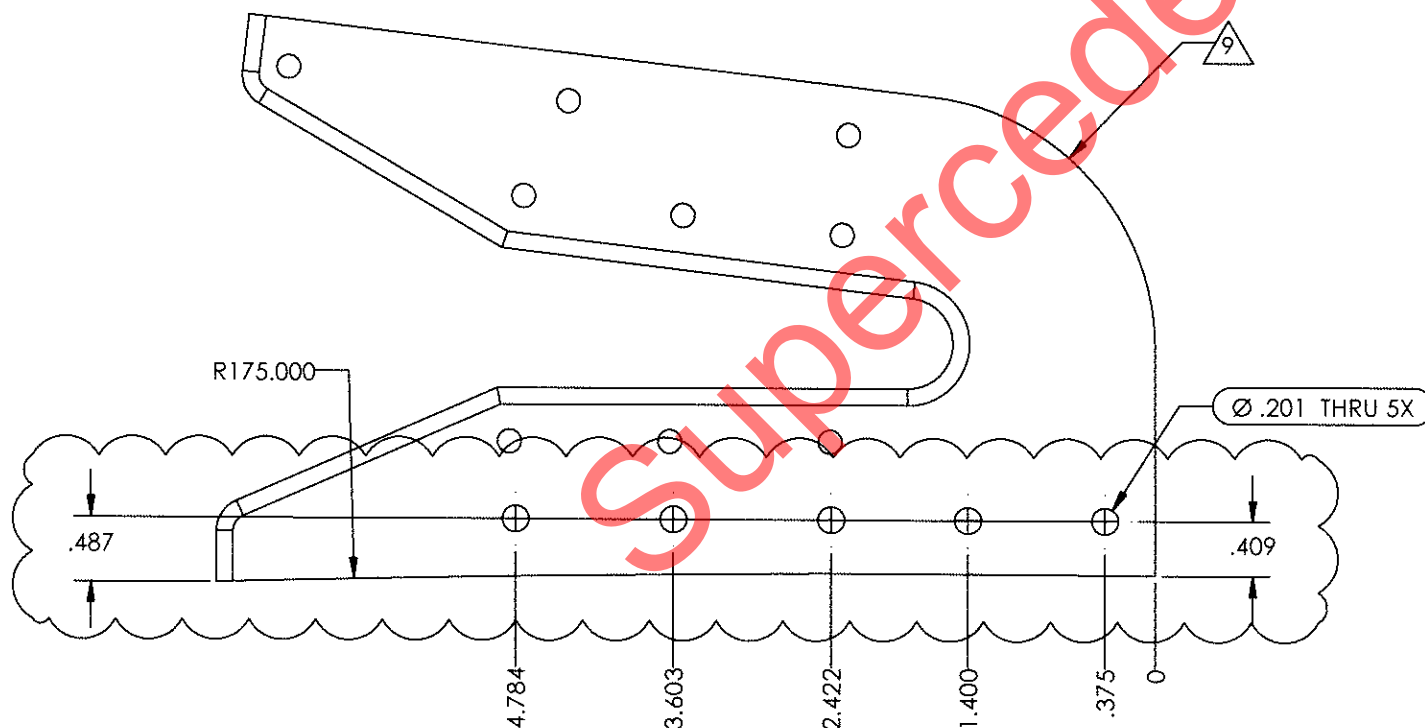
ECR:

N/A

ACTION ITEM:

1.

**SHEET 7, ZONE C3 IS:**



DOCUMENTS EFFECTED:

☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO



APICAL INDUSTRIES, INC.  
dba DART AEROSPACE

TRANSACTION CODES (TC):  
A-ADD C-CREATE  
R-REVISE D-DELETE

ENGINEERING CHANGE NOTICE NO.

05345

SHEET 1 OF 1

DWG NO. 646.9700

REV: D

PREPARED BY J. GARDINER

DATE: 03/15/16

EFFECT ON DWG  
☐ INC. ☒ UNINC.

DWG TITLE: CUTTER SUB ASSY

APPROVED BY:

ENGR

MFG

QC

EFF.

CURRENT ORDER

REASON: REVISED NOTES

ECR: N/A

ACTION ITEM:  
1.

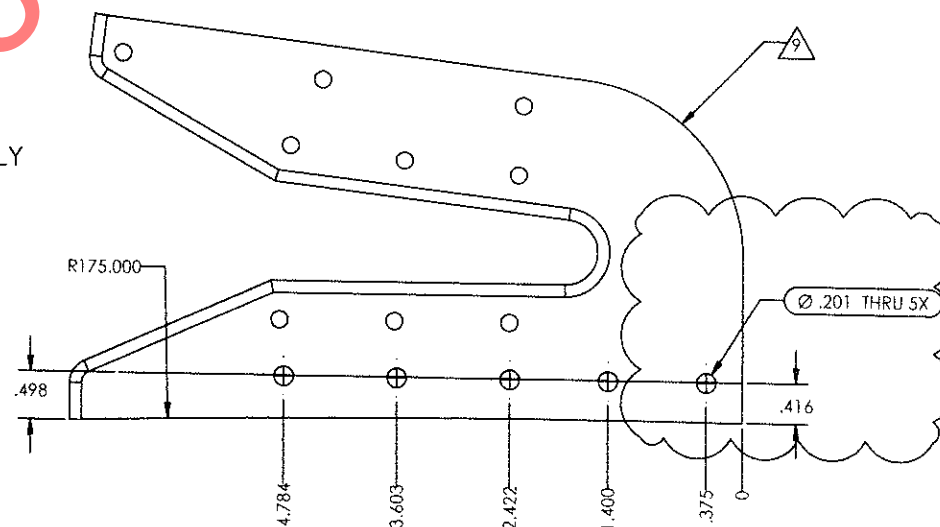
## SHEET 1, ZONE A6 IS:

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH IAW MPP-172 SECTION 2.1, 3.3 & 4.3.
- 3 MATERIAL: AISI A2 TOOL STEEL  
CONDITION: ANNEALED  
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MPP-172 SECTION 3.3; 1-2 MIL MAX
- 5 DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
- 6 IDENTIFY IAW MPP-120
- 7 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 ALL DIMENSIONS NOT SPECIFIED ARE CONTROLLED BY 646.9710.

IS

## SHEET 7, ZONE C5 IS:



DOCUMENTS EFFECTED:

☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

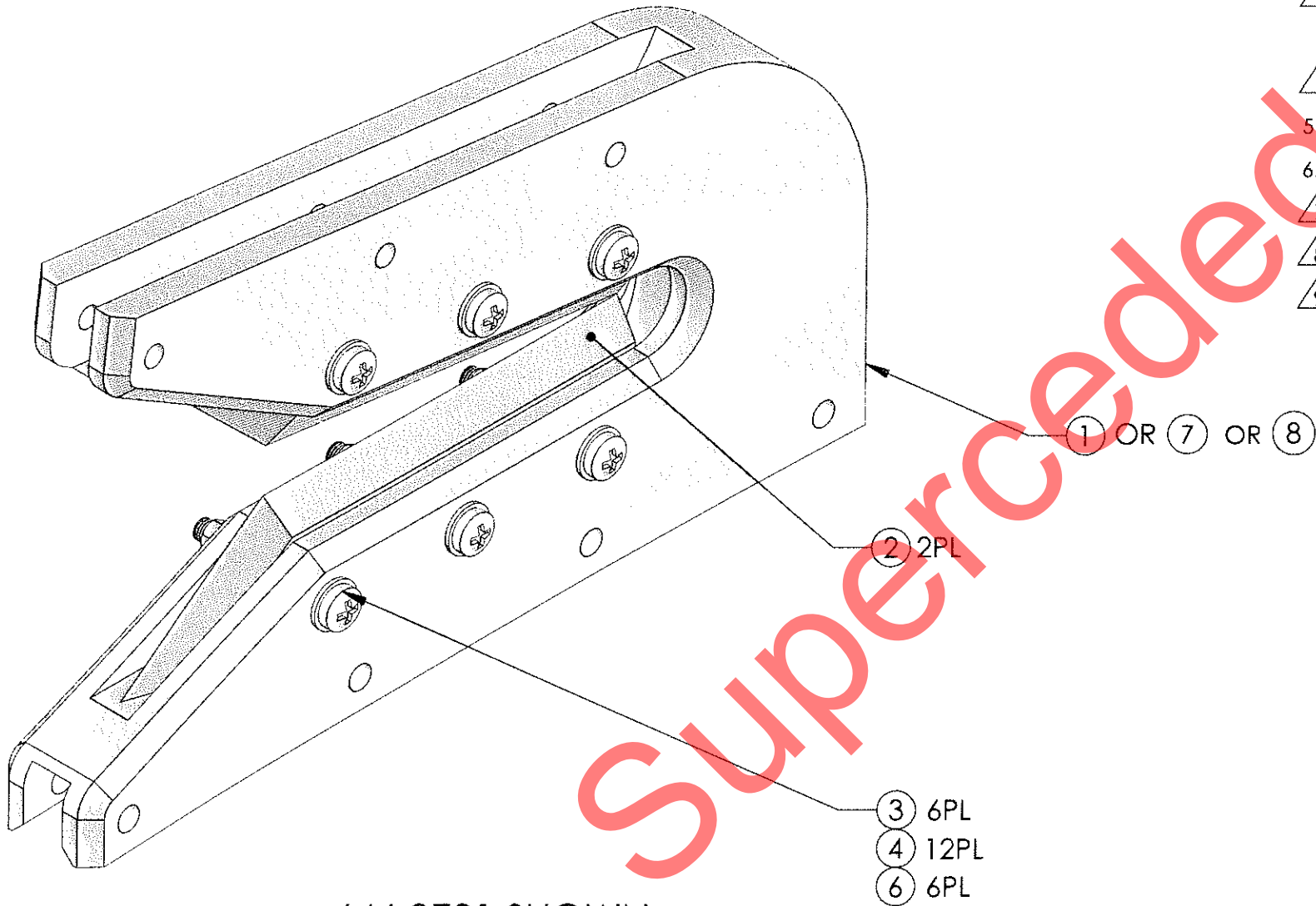
☐ YES ☒ NO

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION - PR2		N/C
NC	INITIAL RELEASE	03/29/09	P. BRAVO
A	INCORPORATED ECN 02744, 03838, 03912	06/06/13	P. BRAVO
B	INCORPORATED ECN 03967	07/03/13	P. BRAVO
C	INCORPORATED ECN 04039	08/09/13	P. BRAVO
D	INCORPORATED ECN 05329	02/26/16	P. BRAVO

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH IAW MPP-172 SECTION 3.3 & 4.3.
- 3 MATERIAL: AISI A2 TOOL STEEL  
CONDITION: ANNEALED  
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MPP-172 SECTION 3.3; 1-2 MIL MAX
- 5 DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
- 6 IDENTIFY IAW MPP-120
- 7 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 ALL DIMENSIONS NOT SPECIFIED ARE CONTROLLED BY 646.9710.



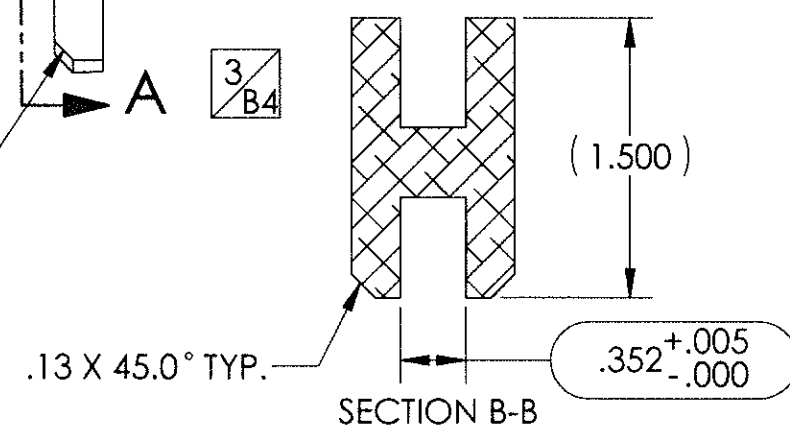
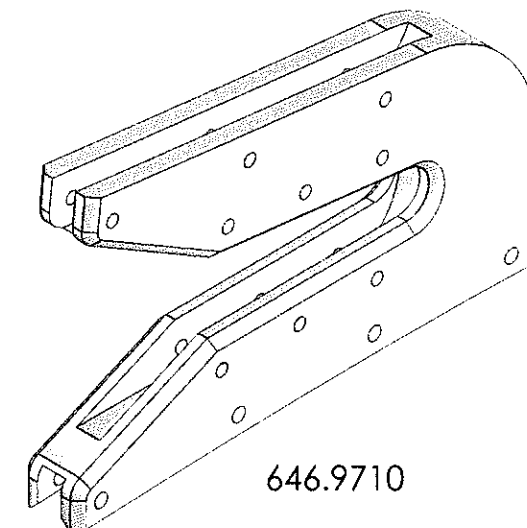
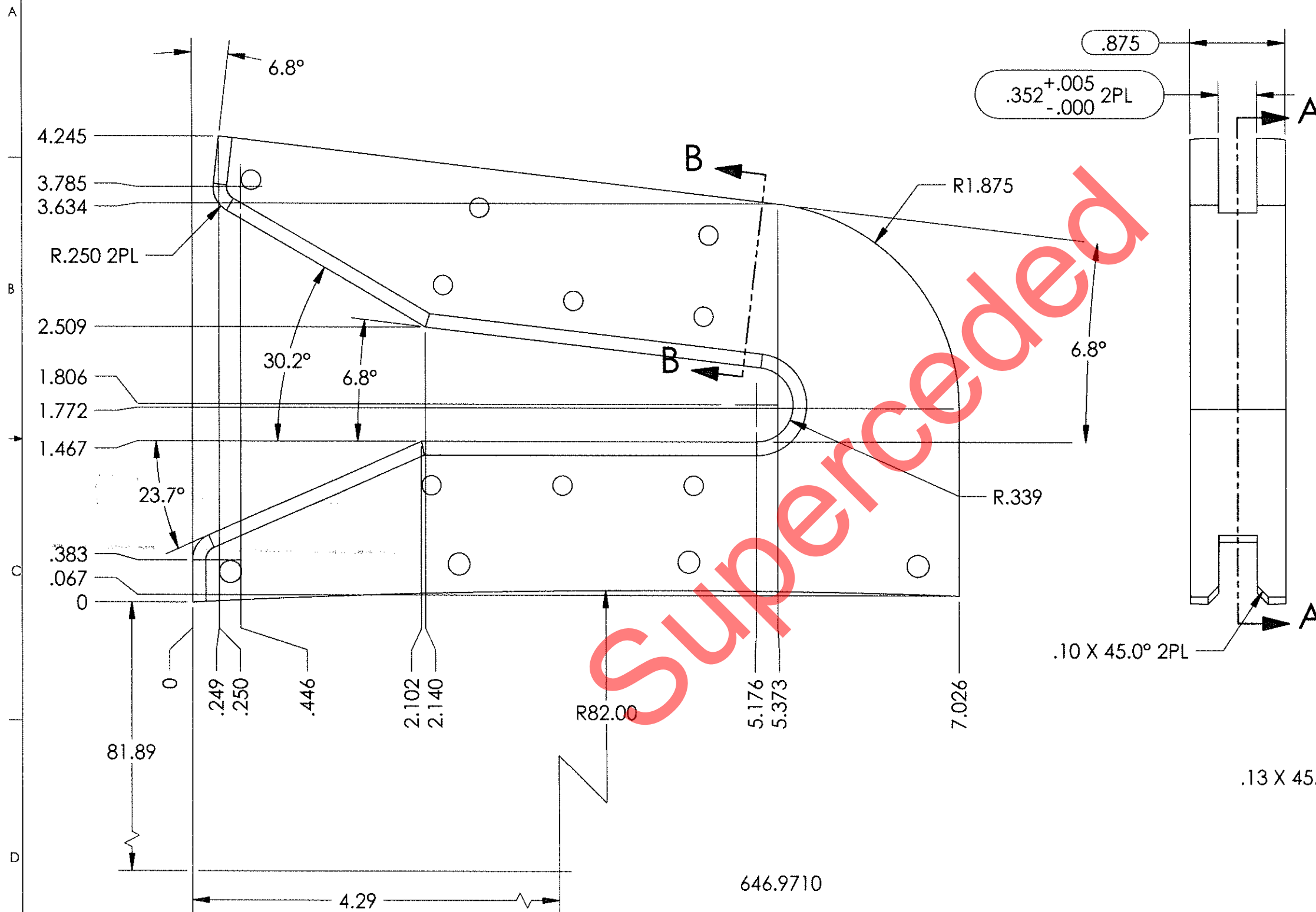
646.9701 SHOWN  
646.9702 & 646.9703 TYP


UNINCORPORATED ECN(s)

05345, 05360,

1			8	646.9713	BODY	1	1
	1		7	646.9712	BODY	1	1
6	6	6	6	601.1541	LOCKNUT	MS21042L08	
A/R	A/R	A/R	5	601.2045	RTV, LOCTITE 598		
12	12	12	4	601.2764	WASHER	NAS1149FN832P	
6	6	6	3	601.2765	SCREW	MS27039-0819	
2	2	2	2	646.9711	BLADE	1	1
		1	1	646.9710	BODY		1
X				646.9703	CUTTER SUB ASSY		
	X			646.9702	CUTTER SUB ASSY		
		X		646.9701	CUTTER SUB ASSY		
.9703	.9702	.9701	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
QTY				PARTS LIST			
NEXT ASSY (S)				ORIGINAL DATE (MO-DA-YR) 05-29-09			
646.9600				DRAWN BY R. ROSANO CHECKER P. BRAVO			
				DRAWING APPROVAL P. BRAVO 05-29-09			
				CONTRACT No.			
				UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°			
				DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300			
				CUTTER SUB ASSEMBLY			
				SIZE B CAGE CODE 07M26 DWG. NO. 646.9700 REV. D			
				SCALE NONE SHEET 1 OF 7			

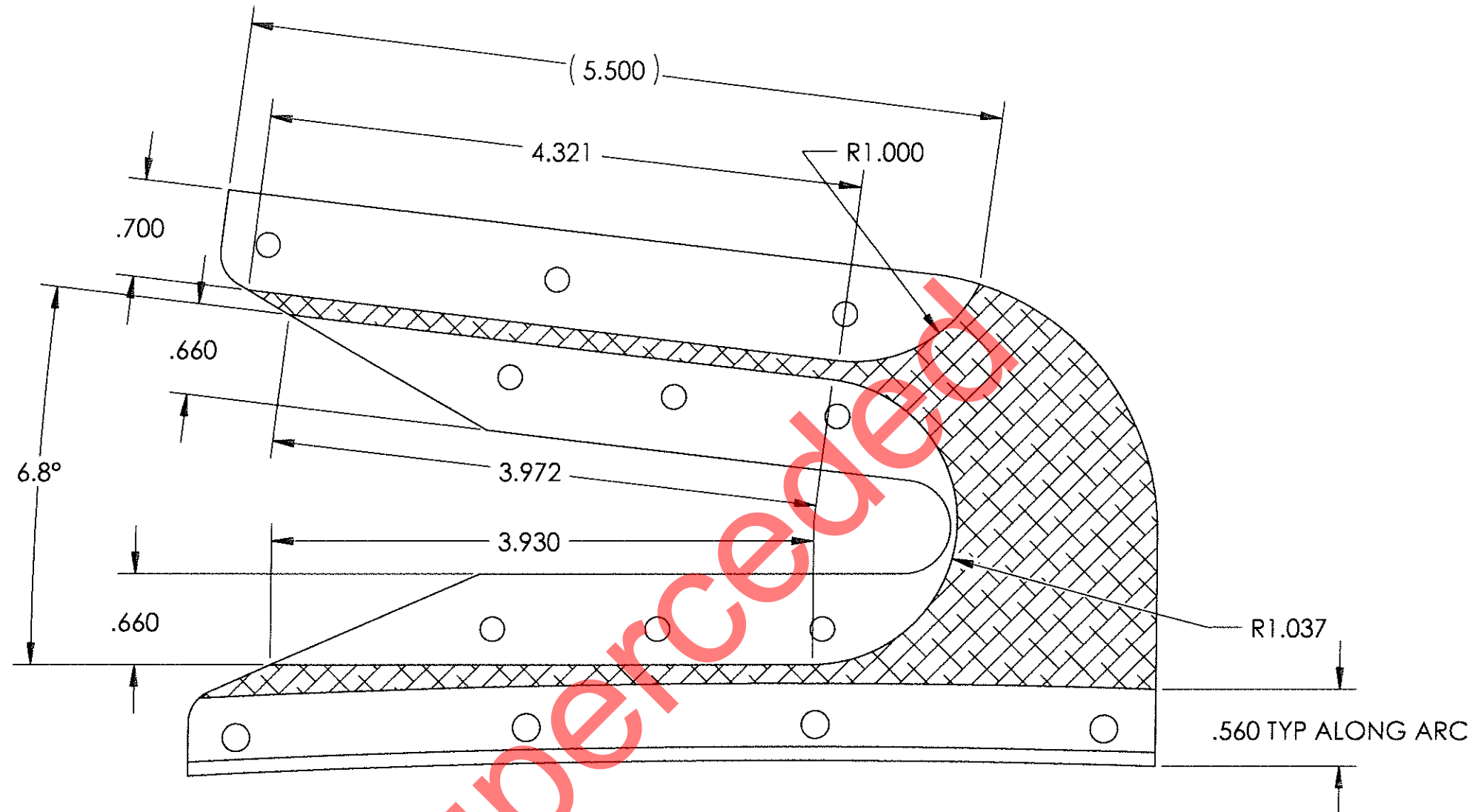
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ORIGINAL DATE (MO-DA-YR) 05-29-09	 3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-5300 APICAL INDUSTRIES, INC. dba DART AEROSPACE			
DRAWN BY R. ROSANO	CHECKER P. BRAVO	CUTTER SUB ASSEMBLY		
DRAWING APPROVAL P. BRAVO 05-29-09				
CONTRACT No.	SIZE B	CAGE CODE 07MZ6	DWG. NO. 646.9700	REV. D
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ± .5°	SCALE NONE		SHEET 2 OF 7	


1 2 3 4 5 6 7 8

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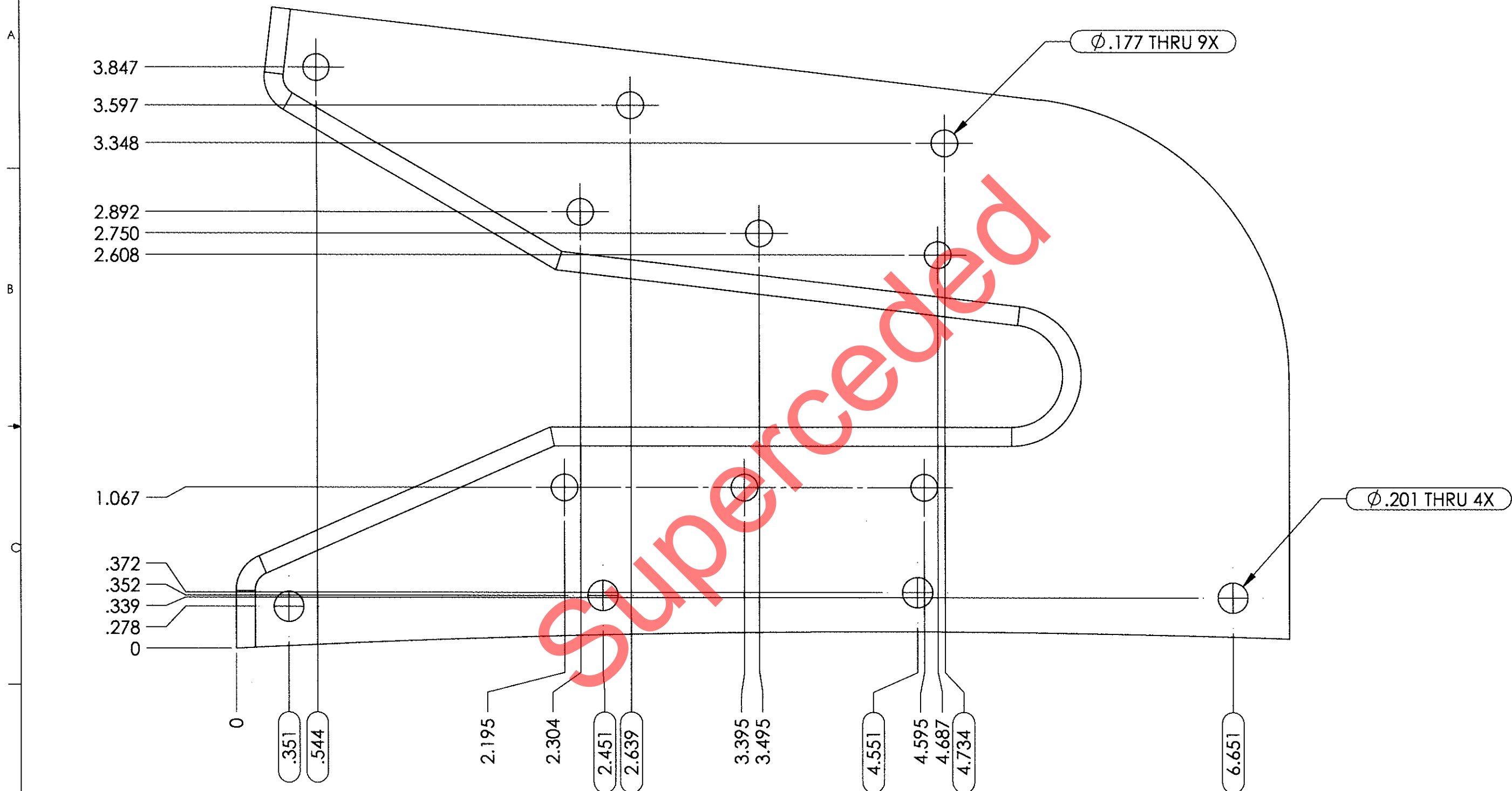


SECTION A-A  $\frac{2}{C6}$

646.9710

ORIGINAL DATE (MO-DA-YR) 05-29-09		 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300			
DRAWN BY R. ROSANO	CHECKER P. BRAVO	APICAL INDUSTRIES, INC. dba DART AEROSPACE			
DRAWING APPROVAL P. BRAVO 05-29-09					
CONTRACT No.		CUTTER SUB ASSEMBLY			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		SIZE B	CAGE CODE 07M26	DWG. NO. 646.9700	REV. D
		SCALE NONE		SHEET 3 OF 7	

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HOLE LOCATIONS +/- .002

646.9710

ORIGINAL DATE  
(MO-DA-YR) 05-29-09  
DRAWN BY  
R. ROSANO  
CHECKER  
P. BRAVO  
DRAWING APPROVAL  
P. BRAVO  
05-29-09  
CONTRACT No.

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE:  
2 PLACE DECIMALS ±.01  
3 PLACE DECIMALS ±.005  
ANGLES ±.5°

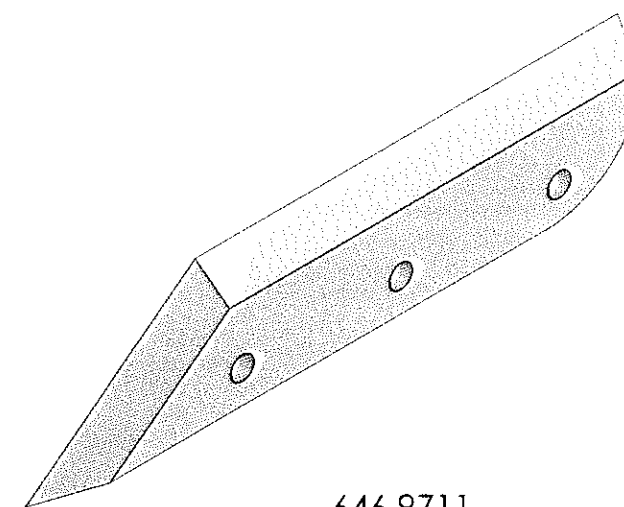
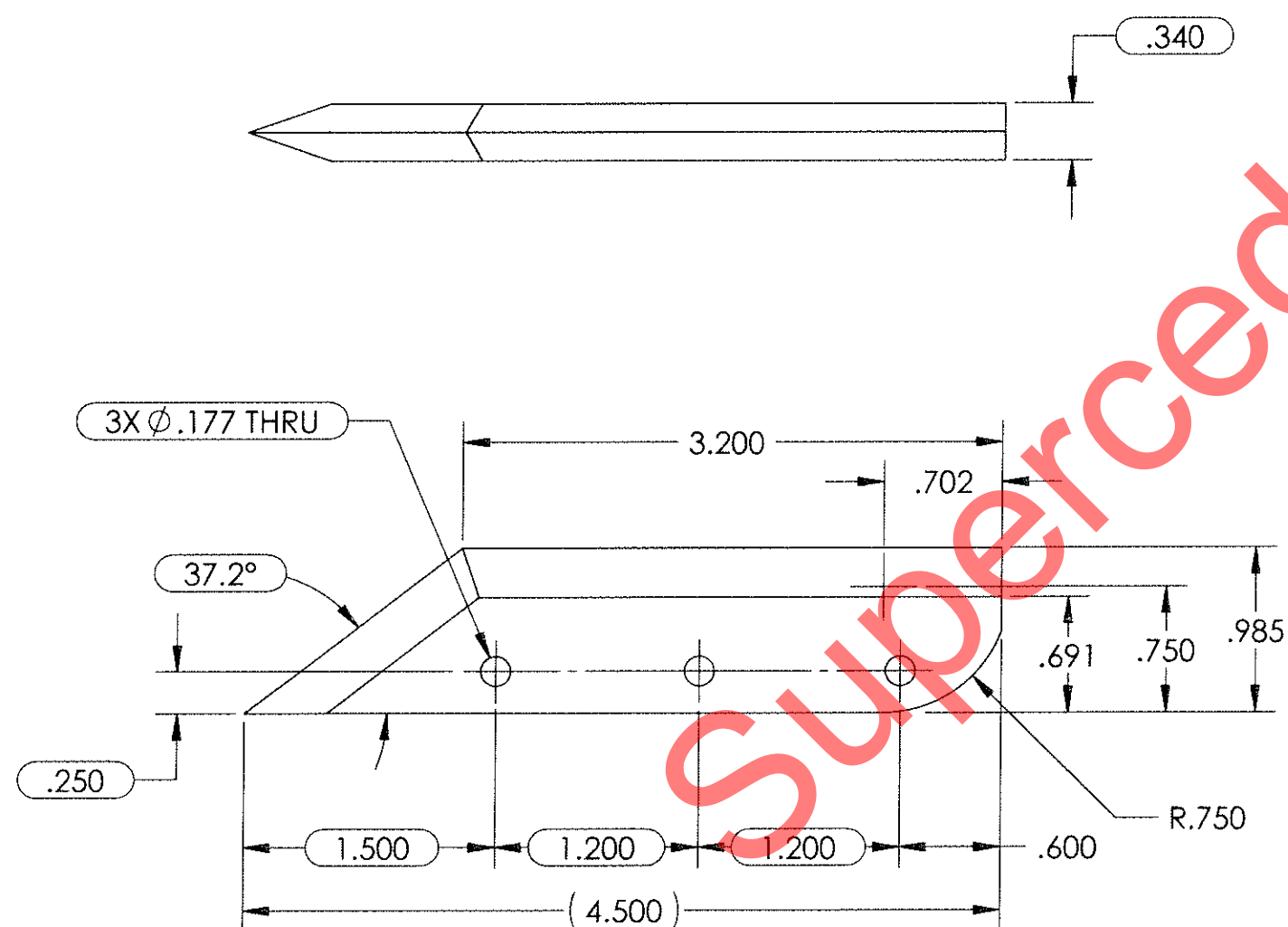
**DART** 3030 ENTERPRISE CT.,  
AEROSPACE SUITE A  
VISTA, CA. 92081  
APICAL INDUSTRIES, INC. (760)-724-5300  
dba DART AEROSPACE

CUTTER SUB ASSEMBLY

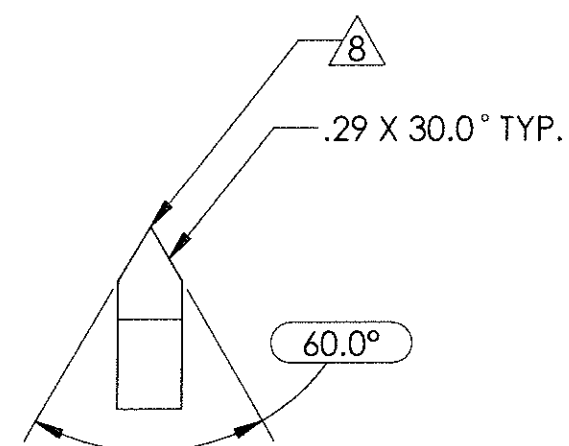
SIZE	CAGE CODE	DWG. NO.	REV.
B	07MZ6	646.9700	D
SCALE NONE		SHEET 4 OF 7	




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646.9711



646.9711

ORIGINAL DATE (MO-DA-YR) 05-29-09	 3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-5300				
DRAWN BY R. ROSANO		CHECKER P. BRAVO			
DRAWING APPROVAL P. BRAVO 05-29-09					
CONTRACT NO.		CUTTER SUB ASSEMBLY			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ± .3°		SIZE B	CAGE CODE 07MZ6	DWG. NO. 646.9700	REV. D
		SCALE NONE		SHEET 5 OF 7	

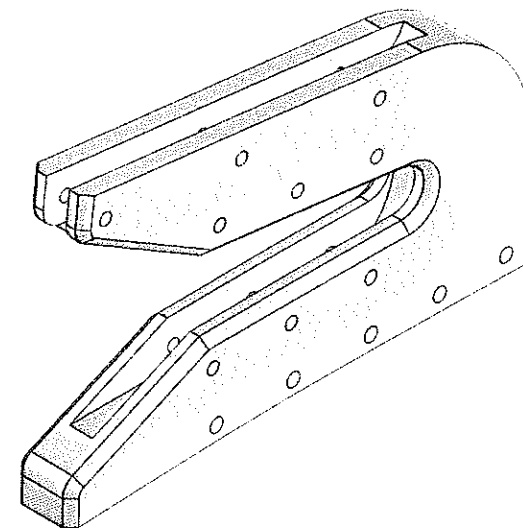
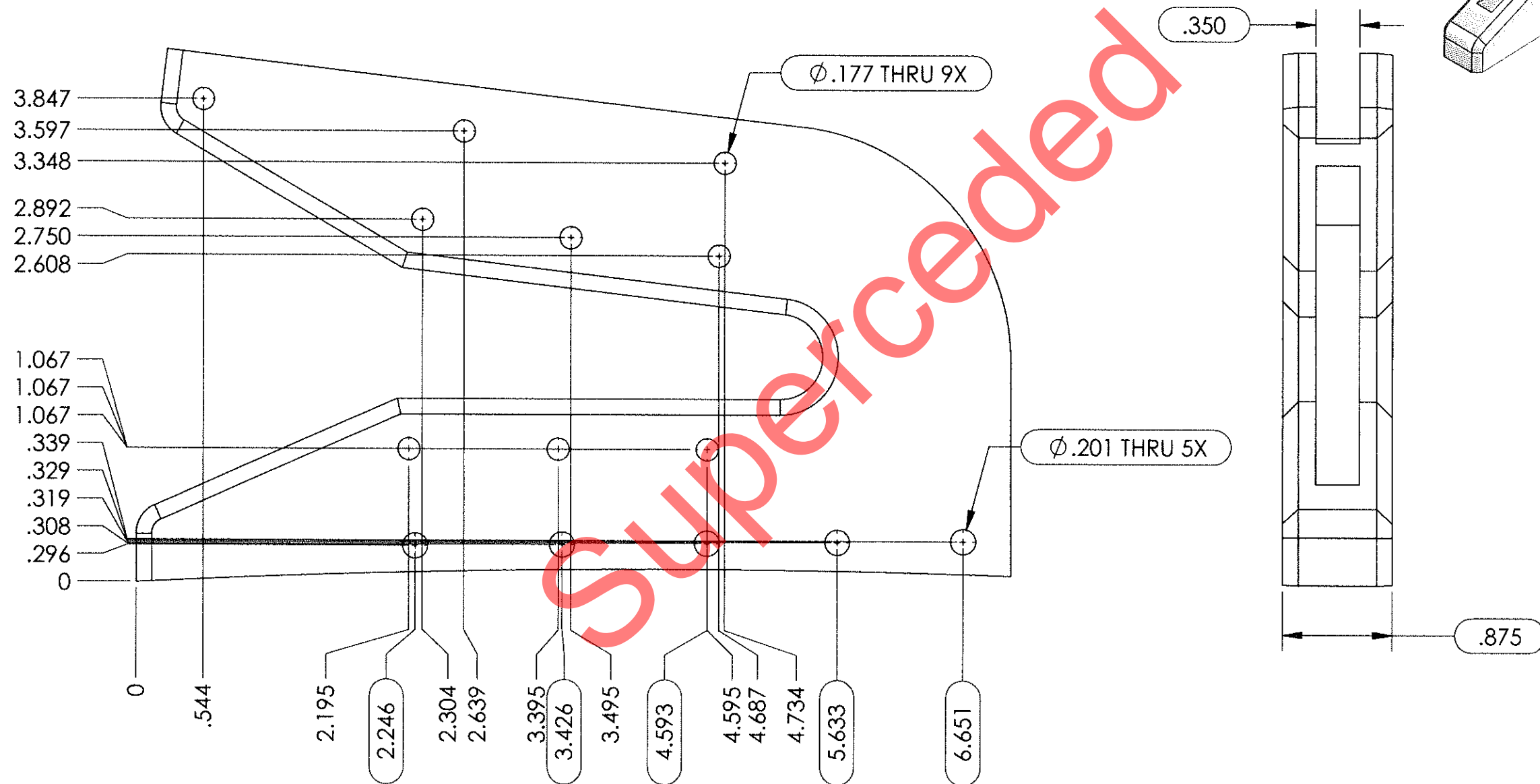
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A

B

C

D



646.9712 9

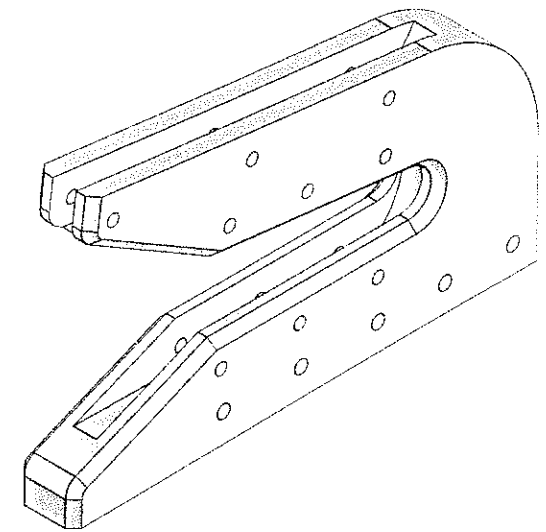
646.9712

ORIGINAL DATE (MO-DA-YR) 05-29-09		<b>DART</b> 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY R. ROSANO	CHECKER P. BRAVO		
DRAWING APPROVAL P. BRAVO 05-29-09		APICAL INDUSTRIES, INC. dba DART AEROSPACE	
CONTRACT No.		CUTTER SUB ASSEMBLY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm 5^\circ$		SIZE B	REV D
		CAGE CODE 07MZ6	DWG. NO. 646.9700
		SCALE NONE	SHEET 6 OF 7

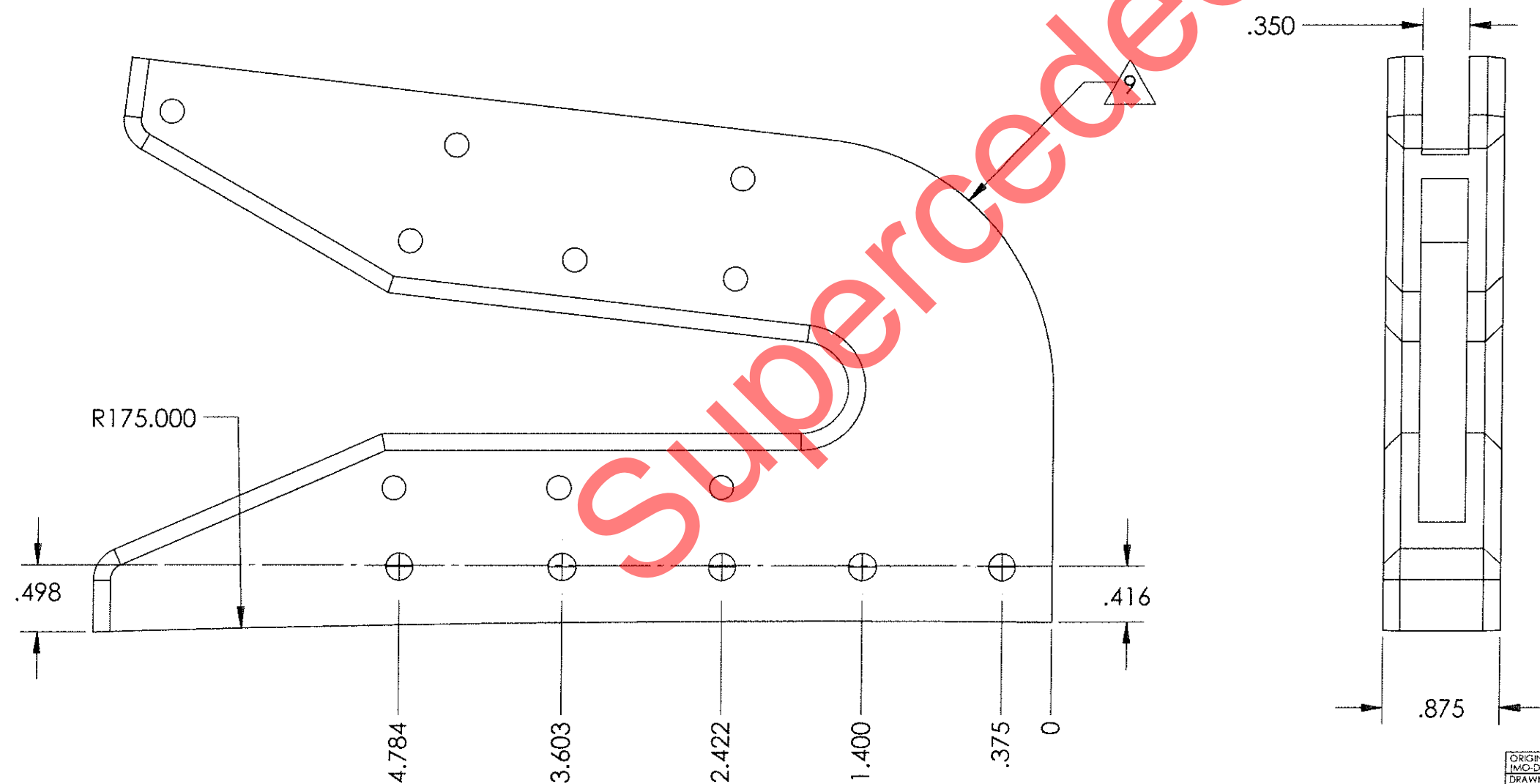


1 2 3 4 5 6 7 8

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646.9713



ORIGINAL DATE (MO-DA-YR) 05-29-09		<b>DART</b> 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300 AFICAL INDUSTRIES, INC. dba DART AEROSPACE	
DRAWN BY R. POSANO	CHECKER P. BRAVO		
DRAWING APPROVAL P. BRAVO 05-29-09		CUTTER SUB ASSEMBLY	
CONTRACT No.		SEE CAGE CODE B 07M26	REV. D
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ± .5°		DWG. NO. 646.9700	SHEET 7 OF 7
		SCALE NONE	